

## REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 12, 13, and 16 were amended. Support for the amendments to claims 12 and 16 can be found at least at page 4, lines 2-4. No new matter has been introduced by the amendment to claim 13 as one of ordinary skill in the art would recognize that TEFLON is a trade name used for polytetrafluoroethylene fluorocarbon polymer and fluorinated ethylene-propylene resin, while EPDM is an acronym for ethylene-propylene terpolymer. See Lewis Sr., Richard J., *Hawley's Condensed Chemical Dictionary*, p. 472, p. 1076 (13th ed. 1997) attached hereto.

### Harris (U.S. Pat. No. 4,640,713)

Claims 12-19 were rejected under 35 U.S.C. §103 as obvious over Harris (U.S. Pat. No. 4,640,713). Applicants respectfully traverse this rejection.

Claim 12 is directed to a method of removing silver soil from the surface of an object. Claim 12 requires that the object be contacted with a composition having a pH greater than 7.0.

Harris is directed to a method of removing tarnish from metal objects. (Col. 2, ll. 11-14). Harris fails to teach, or even suggest, that the formulation should have a pH greater than 7.0. Rather, Harris teaches that an "essential ingredient" to the tarnish remover is an acid. (Col. 2, ll. 38-41). Specifically, Harris teaches that the formulation should comprise from about 0.1 to 25 wt.% acid, while 3 to 8 wt.% acid is preferred. (Col. 3, ll. 32-42). Thus, Harris actually teaches against a composition having a pH greater than 7.0. There is no suggestion or motivation to use a composition having a pH greater than 7.0 under the method taught by Harris. For at least this reason, the method of claims 12 would not have been obvious from Harris.

Claims 13-15 depend from claim 12, an allowable base claim. For at least this reason, the methods of claims 13-15 would not have been obvious from Harris.

Claim 16 is directed to a method of removing silver soil from the surface of a photoprocessing rack. Like claim 12, the method of claim 16 requires contacting the object to be treated with a composition having a pH greater than 7.0.

As previously discussed, Harris teaches against the use of a composition with a pH greater than 7.0 as required by claim 16. Thus, there is no suggestion or motivation to modify the method taught by Harris by using a composition having a pH greater than 7.0. For at least this reason, the method of claim 16 would not have been obvious from Harris.

Claims 17-19 depend from claim 16, an allowable base claim. For at least this reason, Applicants respectfully contend these claims are also in condition for allowance.

Darmon et al. (U.S. Pat. No. 5,198,141)

Claims 12-16 were rejected under 35 U.S.C. § 103 as obvious over Darmon et al. (U.S. Pat. No. 5,198,141). Applicants respectfully traverse this rejection.

Claim 12 is directed to a method of removing silver soil from the surface of an object. Claim 12 requires that the object be contacted with a composition having a pH greater than 7.0. (p. 4, ll. 1-5).

Darmon et al. is directed to a method for cleaning photographic process devices. Darmon et al. teaches the use of a composition that contains both a mineral acid and acetic acid. (Col. 2, ll. 20-26). Darmon et al. teaches the composition should not have a pH greater than 1. (Col. 2, ll. 26-27). Thus, Darmon et al. specifically teaches against the use of a composition having a pH greater than 7. Furthermore, there is no motivation to modify the method taught by Darmon by using a composition with a pH greater than 7.0. For at least this reason, the method of claim 12 would not have been obvious from Darmon et al.

Claims 13-15 depend from claim 12, an allowable base claim. For at least this reason, the methods of claims 13-15 would not have been obvious from Darmon et al.

The method of claim 16, like claim 12, requires contacting the object to be treated with a composition having a pH greater than 7.0. As previously discussed, Darmon et al. teaches against using a composition having a pH greater than 7.0. Nor is there any motivation to modify the method taught by Darmon by using a composition having a pH greater than 7.0. For at least this reason, the method of claim 16 would not have been obvious from Darmon et al.


In view of the above, Applicants respectfully requests reconsideration of the application in the form of a Notice of Allowance.



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Respectfully submitted,

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*Hawley's*  
*Condensed Chemical*  
*Dictionary*

**THIRTEENTH EDITION**

*Revised by*  
Richard J. Lewis, Sr.

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**Derivation:** (1) Oxidation of ethylene in air or oxygen with silver catalyst; (2) action of an alkali on ethylene chlorohydrin.

**Grade:** Technical, pure (99.7%).

**Hazard:** Irritant to eyes and skin. TLV: 1 ppm in air; a suspected human carcinogen. Highly flammable, dangerous fire and explosion risk, flammable limits in air 3–100%.

**Use:** Manufacture of ethylene glycol and higher glycols, surfactants, acrylonitrile, ethanalamines; petroleum demulsifier; fumigant; rocket propellant; industrial sterilant (e.g., medical plastic tubing); fungicide.

**ethylene-propylene-diene monomer.** See ethylene propylene terpolymer.

**ethylene-propylene rubber.** (EPR). An elastomer made by the stereospecific copolymerization of ethylene and propylene. Has no unsaturation; cannot be vulcanized with sulfur but can be cured with peroxides.

**ethylene-propylene terpolymer.** (EPT;

EPDM). An elastomer based on stereospecific linear terpolymers of ethylene, propylene, and small amounts of a nonconjugated diene, e.g., a cyclic or aliphatic diene (hexadiene, dicyclopentadiene, or ethylidene norbornene). The unsaturated part of the polymer molecule is pendant from the main chain, which is completely saturated. Can be vulcanized with sulfur.

**Properties:** (Vulcanizate) Light-cream to white; excellent resistance to ozone, to high and low temperatures (from  $-51$  to  $+148^{\circ}\text{C}$ ), and to acids and alkalies; good electrical resistance, susceptible to attack by oils; pelletized forms available.

**Use:** Automotive parts, gaskets, cable coating, mechanical rubber products, cover strips for tire sidewalls, tire tubes, safety bumpers, coated fabrics, footwear, wire and cable coating, thermoplastic resin modifier.

See "Nordel."

**ethylene thiourea.**

CAS: 96-45-7.



(2-imidazolidinethione).

**Properties:** White to pale-green crystals; faint amine odor. Mp  $199$ – $204^{\circ}\text{C}$ . Slightly soluble in cold water; very soluble in hot water; slightly soluble at room temperature in methanol, ethanol, acetic acid, naphtha.

**Use:** Electroplating baths; intermediate for antioxidants, insecticides, fungicides, vulcanization accelerators, dyes, pharmaceuticals, synthetic resins.

**ethylene urea.** (2-imidazolidinone; dihydro-2(3)-imidazolone; 2-imidazolidone).

CAS: 120-93-4.



**Properties:** White, lumpy powder; odorless. Mp  $125$ – $128^{\circ}\text{C}$ . Soluble in water.

**Derivation:** From ethylenediamine and urea.

**Use:** Drip-dry textile products, ingredient of plasticizers and adhesives, insecticide.

**ethylene-vinyl acetate copolymer.** (EVA). An elastomer used to improve adhesion properties of hot-melt and pressure-sensitive adhesives, as well as for conversion coatings and thermoplastics. See "Ultrathene."

**ethylenimine.** See ethyleneimine.

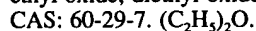
**N-ethylethanolamine.** (ethylaminoethanol).



**Properties:** Colorless liquid; amine odor. D  $0.914$  ( $20^{\circ}\text{C}$ ), boiling range  $167$ – $169^{\circ}\text{C}$  flash p  $160^{\circ}\text{F}$  ( $71.1^{\circ}\text{C}$ ) (OC). Soluble in water, alcohol, and ether. Combustible.

**Use:** Solvent, intermediate.

**ethyl ether.** (ether; diethyl ether; sulfuric ether; ethyl oxide; diethyl oxide).



**Properties:** Colorless, volatile, mobile liquid. Hygroscopic, aromatic odor, burning and sweet taste. Bp  $34.5^{\circ}\text{C}$ , fp  $-116.2^{\circ}\text{C}$ , d  $0.7147$  ( $20/20^{\circ}\text{C}$ ), surface tension  $17.0$  dynes/cm ( $20^{\circ}\text{C}$ ), refr index  $1.3526$  ( $20^{\circ}\text{C}$ ), viscosity  $0.00233$  cP ( $20^{\circ}\text{C}$ ), vap press  $442$  mm Hg ( $20^{\circ}\text{C}$ ), specific heat  $0.5476$  cal/g ( $30^{\circ}\text{C}$ ), flash p  $-49^{\circ}\text{F}$  ( $-45^{\circ}\text{C}$ ), autoign temp  $356^{\circ}\text{F}$  ( $180^{\circ}\text{C}$ ), latent heat of evaporation  $83.96$  cal/g at bp, electric conductivity  $4 \times 10^{-3}$  mho/cm ( $25^{\circ}\text{C}$ ), bulk d  $6$  lb/gal ( $20^{\circ}\text{C}$ ). Soluble in alcohol, chloroform, benzene, solvent naphtha, and oils; slightly soluble in water.

**Derivation:** By the action of sulfuric acid on ethanol or ethylene followed by distillation.

**Method of purification:** Rectification, dehydration, treatment with alkali and charcoal.

**Grade:** USP (for anesthesia), ACS Reagent, ACS Absolute, CP, concentrated, USP 1880, washed, motor, electronic.

**Hazard:** CNS depressant by inhalation and skin absorption. Very flammable, severe fire and explosion hazard when exposed to heat or flame. TLV:  $400$  ppm in air. Forms explosive peroxides. Explosive limits in air  $1.85$ – $48\%$ .

**Use:** Organic synthesis; smokeless powder; industrial solvent (nitrocellulose, alkaloids, fats, waxes, etc.); analytical chemistry; anesthetic, extractant.

**ethyl-3-ethoxypropionate.**



**Properties:** Liquid. D  $0.9496$  ( $20^{\circ}\text{C}$ ), bp  $170.1^{\circ}\text{C}$ , vap press  $0.9$  mm Hg ( $20^{\circ}\text{C}$ ), sets to glass at  $-100^{\circ}\text{C}$ , flash p  $180^{\circ}\text{F}$  ( $82.2^{\circ}\text{C}$ ) (OC). Slightly soluble in water. Combustible.

**Use:** Intermediate for vitamin B<sub>1</sub>, other chemicals.

reactor fission products by solvent extraction followed by crystallization as ammonium pertechnetate, which is reduced with hydrogen. The metal is silver-gray in appearance, mp 2200C (4000F), d 11.5, slightly magnetic. Compounds of the types  $\text{TeO}_2$ ,  $\text{Tc}_2\text{O}_7$ ,  $\text{NH}_4\text{TcO}_4$ , etc. have been prepared. The pertechnetate ion has strong anticorrosive properties. Technetium and its alloys are superconductors and can be used to create high-strength magnetic fields at low temperature. Tc-99 (metastable) is the most widely used isotope in nuclear medicine.

Use: Metallurgical tracer, cryochemistry, corrosion resistance, nuclear medicine.

**Technical Association of the Pulp and Paper Industry.** (TAPPI). A professional group of scientists devoted to the interests of pulp and paper chemistry and technology. Founded in 1915, it has seven sections, each concerned with a specific phase of the industry. It also has 11 local sections that hold monthly meetings. The association publishes its own journal, as well as industry data sheets, bibliographies, technical monographs on subjects relating to the paper industry. It establishes standards of quality and testing procedures. The address is Technical Park, PO Box 105113, Atlanta, GA 30348.

**"Tedlar" [Du Pont].** TM for polyvinylfluoride film.

**TEDP.** Abbreviation for tetraethyl dithiopyrophosphate.  
See sulfotep.

**"Tedur" [Mobay].** TM for polysulfide polymers. Available forms: Glass, mineral, and mineral/glass grades.

Use: Injection molding for high-temperature and performance electronic and automotive parts.

**"Teflon" [Du Pont].** TM for tetrafluoroethylene (TFE) fluorocarbon polymers available as molding and extrusion powders, aqueous dispersion, film, finishes, and multifilament yarn or fiber. The name also applies to fluorinated ethylene-propylene (FEP) resins available in the same forms. The no-stick cookware finishes may be of either type. Fibers are monofilaments made from copolymer of TFE and FEP.

Use: Packing, bearings, filters, electrical insulation, high-temperature industrial plastics, cooking utensils, plumbing sealants, coating glass fiber for architectural structure composites, bonding industrial diamonds to metal in the manufacture of grinding wheels.

See fluorocarbon polymer.

**TEG.** Abbreviation for tetraethylene glycol and triethylene glycol.

**"Tego" [Rohm & Haas].** TM for thin tissue impregnated with heat-convertible phenol-formaldehyde resin, supplied in rolls. Produces waterproof bond with plywood veneers.

Use: Hot-press bonding of furniture veneers, premium wall paneling.

**TEL.** Abbreviation for tetraethyl lead.

**telluric acid.** (hydrogen tellurate).

CAS: 7803-68-1.  $\text{H}_2\text{TeO}_4 \cdot 2\text{H}_2\text{O}$  or  $\text{H}_6\text{TeO}_6$ .

Properties: White, heavy crystals. D 3.07, mp 136C. Soluble in hot water and alkalis; slightly soluble in cold water.

Derivation: Action of sulfuric acid on barium tellurate.

Hazard: As for tellurium.

Use: Chemical reagent.

**telluric bromide.** See tellurium tetrabromide.

**tellurium.**

CAS: 13494-80-9. Te. A nonmetallic element with many properties similar to selenium and sulfur. Atomic number 52, group VIA of the periodic table, aw 127.60, valences of 2, 4, 6; eight stable isotopes.

Properties: Silvery-white, lustrous solid with metal characteristics. D 6.24 g/cc (30C), Mohs hardness 2.3, mp 450C, bp 990C. Soluble in sulfuric acid, nitric acid, potassium hydroxide, and potassium cyanide solutions; insoluble in water. Imparts garlic-like odor to breath; can be depilatory. It is a p-type semiconductor and its conductivity is sensitive to light exposure.

Source: From anode slime produced in electrolytic refining of copper and lead.

Derivation: Reduction of telluric oxide with sulfur dioxide; by dissolving the oxide in a caustic soda solution and plating out the metal.

Grade: Powder, sticks, slabs, and tablets, 99.5% pure, crystals up to 99.999% pure.

Hazard: (Metal and compounds as tellurium) Toxic by inhalation. TLV: 0.1 mg/m<sup>3</sup> of air.

Use: Alloys (tellurium lead, stainless steel, iron castings), secondary rubber vulcanizing agent, manufacture of iron and stainless steel castings, coloring agent in glass and ceramics, thermoelectric devices, catalysts, with lithium in storage batteries for spacecraft.

For further information refer to the Selenium-Tellurium Development Association, 11 Broadway, New York, NY 10003.

**tellurium bromide.** See tellurium dibromide and tellurium tetrabromide.

**tellurium chloride.** See tellurium dichloride.

**tellurium dibromide.** (tellurium bromide; tellurous bromide).  $\text{TeBr}_2$ .

Properties: Blackish-green, crystalline mass or gray to black needles; very hygroscopic. Mp 210C, bp

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